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EXAMINER

KURTZ, BENJAMIN M

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT G. SANDERS

Appeal 2009-010605
Application 10/822,747
Technology Center 1700

Decided: March 24, 2010

Before CATHERINE Q. TIMM, BEVERLY A. FRANKLIN, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 19, 21, 22, and 24. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

Claim 1 is illustrative of the invention:

1. In a method of making a filter media comprising a web of thermoplastic fibers, wherein said thermoplastic fibers are surface modified by treatment with a gaseous plasma at atmospheric pressure, the improvement wherein the gaseous plasma consists essentially of air and at least one gas selected from the group consisting of He, Ar, Ne, N₂, Kr and combinations thereof, and the thermoplastic fibers are electrostatically charged.

The Examiner relies upon the following prior art references in the rejection of the appealed claims:

Roth	US 5,403,453	Apr. 4, 1995
Jones	US 6,953,544 B2	Oct. 11, 2005

The Examiner maintains, and Appellant seeks review of, the rejection of all the claims on appeal under 35 U.S.C. § 103(a) as being unpatentable over the combined prior art of Roth and Jones¹.

Appellant presents arguments concerning the rejected claims as a group (App. Br. 4-9). Appellant does not advance an argument that is reasonably specific to any particular claim on appeal. Thus, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we select claim 1 as the representative claim on which our discussion will focus.

¹ The claims were amended after final to incorporate dependent claim 2 into claim 1; accordingly, all the claims are now rejected under § 103 based on Roth and Jones (App. Br. 4; Ans. 3).

ISSUE ON APPEAL

The issue is whether the Examiner has erred in his determination that it would have been obvious to both treat fiber material with a gaseous plasma treatment, as exemplified in Roth, as well as to electrostatically charge the fiber material to make an electret, as exemplified in Jones. We answer this question in the negative.

FINDINGS OF FACT (FF)

We refer to the Examiner's findings and conclusion of obviousness with respect to the use of both a gaseous plasma treatment to enhance wettability of polymeric fibers, as exemplified in Roth, as well as a corona discharge step to electrostatically charge polymeric fibers to transform fibers into an electret, as exemplified in Jones (Ans. 3-6).

We add the following primarily for emphasis.

Appellant admits that filtration properties of nonwoven polymeric fibrous webs can be improved by transforming the web into an electret, and that such electrostatically charged filters are common today (Spec. 1, para. [0002]). Appellant also describes that it is well known to charge fibers to produce electrets by "corona charging" (Spec. 1, para. [0003]), and "can be improved by incorporating fluorochemicals into the melt used to produce the fibers of some electrets" (*id.*).

Appellant describes "post charging the media through *conventional electret charging equipment*" (Spec. 4, para. [0024], emphasis added) and that "after or before gaseous plasma treatment" the fibers may be electrostatically charged "by any means *known in the art with a corona discharge method* being particularly preferred". (Spec. 6, para. [0035], emphasis added).

Jones similarly admits in the “Background” section that transforming a web into an electret was known (Jones, col. 1, ll. 16-32).

One of ordinary skill would have readily appreciated that the use of fluorochemical is optional for a process of electrostatically charging fibers to make them into an electret.

Appellant does not dispute the Examiner’s findings that Roth and Jones both treat the same or similar polymeric materials (Ans. 5, *e.g.*, polypropylene as described in Roth, col. 10, ll. 20-25 and Jones, col. 2, l. 9).

PRINCIPLES OF LAW

In assessing whether a claim to a combination of prior art elements would have been obvious, the question to be asked is whether the improvement of the claim is more than the predictable use of prior art elements according to their established functions. *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007). The analysis need not seek out precise teachings directed to the specific subject matter of the claim, for it is proper to take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *Id.* at 418.

The test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art; one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991); *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097-98 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

ANALYSIS

Appellant contends that Jones only prepares a fluorinated electret and thus there is no reason to combine with Roth (App. Br. 5, 6). This is not

persuasive of error in the Examiner's obviousness conclusion, since it would have been no more than the predictable use of a known prior art treatment, that is, electrostatically charging polymeric fibers (absent fluorination) as exemplified in Jones and admitted to be known by Appellant², for its known purpose in combination with a known treatment as exemplified by Roth to enhance rewettability of the same and similar polymeric fibrous materials.

Appellant's contention that the gas flow of Roth contains "active species" contrary to the present invention (App. Br. 8 and 9) is not well taken. First, Appellant admits that the Examiner's contention that by definition plasma contains some active species is correct (Reply Br. 4). Furthermore, as aptly pointed out by the Examiner, the claim encompasses atmospheric pressure treatment of fibers with a gaseous plasma of air and helium or argon or mixture thereof as taught by Roth (Ans. 3 and 6).

An improvement in the art is also obvious if "it is likely the product not of innovation but of ordinary skill and common sense." *KSR*, 550 U.S. at 421. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.* at 420-21. One of ordinary skill in the art, using no more than ordinary creativity, would have modified Roth to include such a electrostatic charging step before or after its plasma treatment, especially in light of well known advantages of electrostatically charged polymeric fibrous materials.

² An applicant cannot defeat an obviousness rejection by asserting that the cited references fail to teach or suggest elements which the applicant has acknowledged are taught by the prior art. *Constant v. Advanced Micro-Device, Inc.*, 848 F. 2d 1560, 1570 (Fed. Cir. 1988) and *In re Nomiya*, 509 F.2d 566, 571n.5 (CCPA 1975) (A statement by an applicant that certain matter is prior art is an admission that the matter is prior art for all purposes).

Accordingly, Appellant has not persuasively argued that the facts and reasons relied on by the Examiner are insufficient to establish a prima facie case of obviousness, and therefore has not identified any error in the Examiner's reasonable conclusion of obviousness.

We have considered Appellant's other arguments in the Briefs, but do not find any of them persuasive for reasons substantially set forth by the Examiner in the Answer.

Accordingly, we sustain the Examiner's § 103 rejection of claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 19, 21, 22, and 24 based on Roth and Jones.

ORDER

The Primary Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal maybe extended under 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED

PL Initial:
sld

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